



erthwrks

AIR EMISSIONS TESTING FOR INDUSTRY

Relative Accuracy Test Audit

for

Marathon Petroleum Company LP

at the

Detroit Refinery in Detroit, Michigan

on the

Alky Flare

subject to

Permit No. MI-ROP-A9831-2012c

&

40 CFR Part 60, Appendix F



Marathon Petroleum Company LP

Test Date: October 5-6, 2022

Erthwrks Project No. 9049.1.D1

A9831-test2-20221005



Endorsement Page

This report was developed in accordance with the requirements designated in the applicable regulatory permit(s) and or regulatory rules. To the best of my knowledge the techniques, instrumentation, and calculations presented in this report will serve to accurately and efficiently detail the results of the test campaign requirements.

Erthwrks, Inc.

Name: Jason Dunn

Title: QC Specialist

Signature: 

This report has been reviewed for accuracy and completeness. The actions presented in this report are, to the best of my knowledge, an accurate representation of the results and findings of the test campaign. Erthwrks, Inc. operates in conformance with the requirements on ASTM D7036-04 Standard Practice for Competence of Air Emission Testing Bodies and is accredited as such by the Stack Testing Accreditation Council (STAC) and the American Association for Laboratory Accreditation (A2LA).

Erthwrks, Inc.

Name: Trey Chapman

Title: CEO


Signature: 

TABLE OF CONTENTS

1.0	INTRODUCTION	4
1.1	Identification, location and dates of tests	4
1.2	Purpose of Testing	4
1.3	Contact Information	4
2.0	SUMMARY OF RESULTS	5
3.0	SOURCE DESCRIPTION	5
3.1	Description of the process	5
3.2	Applicable permit and source designation	5
4.0	SAMPLING AND ANALYTICAL PROCEDURES	6
4.1	Gaseous Sampling – H ₂ S	6
4.2	RATA Procedures	6
4.3	Discussion of sampling procedure or operational variances	7

List of Tables:

Table 2.1:	GBR Alky Flare RATA Results	5
Table 3.1:	GBR Alky Flare CEMS Description	5

ATTACHMENTS

- A. Detailed Results of Emissions Test
- B. Calibration, QAQC, and Raw Data
- C. Certificates
- D. Example Calculations
- E. CEMS Data

1.0 INTRODUCTION

1.1 Identification, location and dates of tests

Erthwrks, Inc. was contracted to conduct a relative accuracy test audit (RATA) on the hydrogen sulfide (H₂S) continuous emissions monitoring system (CEMS) associated with the Alky Flare in operation at the Detroit Refinery, located in Detroit, Michigan. The RATA test was conducted on October 5-6, 2022.

1.2 Purpose of Testing

This RATA was conducted to demonstrate the accuracy and reliability of the CEMS monitor installed for the Alky Flare used to demonstrate the continuous emission compliance of the unit. All testing and audit procedures were conducted in accordance with the requirements set forth in 40 CFR, Part 60, Appendix B and F, which defines the CEMS performance specifications and testing procedures.

1.3 Contact Information

Marathon Petroleum Company LP

Emily Mattson
Environmental Professional
Michigan Refining Division
O: (313)236-1501
EGMattson@marathonpetroleum.com

Erthwrks, Inc.

Jarrod Hoskinson
Senior Project Manager
P.O. Box 150549
Austin, TX 78715
512-994-7487 office
jhoskinson@erthwrks.com

Erthwrks, Inc.

Jason Dunn
QC Specialist
P.O. Box 150549
Austin, TX 78715
614-565-9177 office
jdunn@erthwrks.com

Facility Location:

1300 South Fort Street
Detroit, MI 48217

2.0 SUMMARY OF RESULTS

Table 2.1: GBR Alky Flare RATA Results

Pollutant Measured	Performance Specification	Relative Accuracy	Applicable Limit	Pass/Fail
H ₂ S	Performance Spec. 7	1.75% <i>RA_{AS}</i>	<10%	Pass

3.0 SOURCE DESCRIPTION

3.1 Description of the process

The flare (or torch) systems are open-flame control devices used for control of waste gas streams during both routine process and emergency or upset conditions. Flare vent gas is released to the flare as a result of relief valve leakage, process upsets, process sweep gas, equipment preparation for maintenance, and supplemental gas streams.

The flare system is equipped with an H₂S monitoring system as required by the refinery Title V Permit and associated State and Federal regulations.

Table 3.1 GBR Alky Flare CEMS Description

Pollutant Measured	Analyzer Manufacturer	Analyzer Model	Detection Principle	Serial Number
H ₂ S	Siemens	Maxum II	Gas Chromatography	30026731501310

3.2 Applicable permit and source designation

The Detroit Refinery operates the Alky Flare monitoring system under the Permit No. MI-ROP-A9831-2012c, 40 CFR Part 60 Subpart Ja, and the CEMS quality assurance procedures delineated in the 40 CFR Part 60, Appendix F. Under these regulations, the Detroit Refinery is required to conduct an annual RATA to demonstrate the relative accuracy of the CEMS associated with this unit.

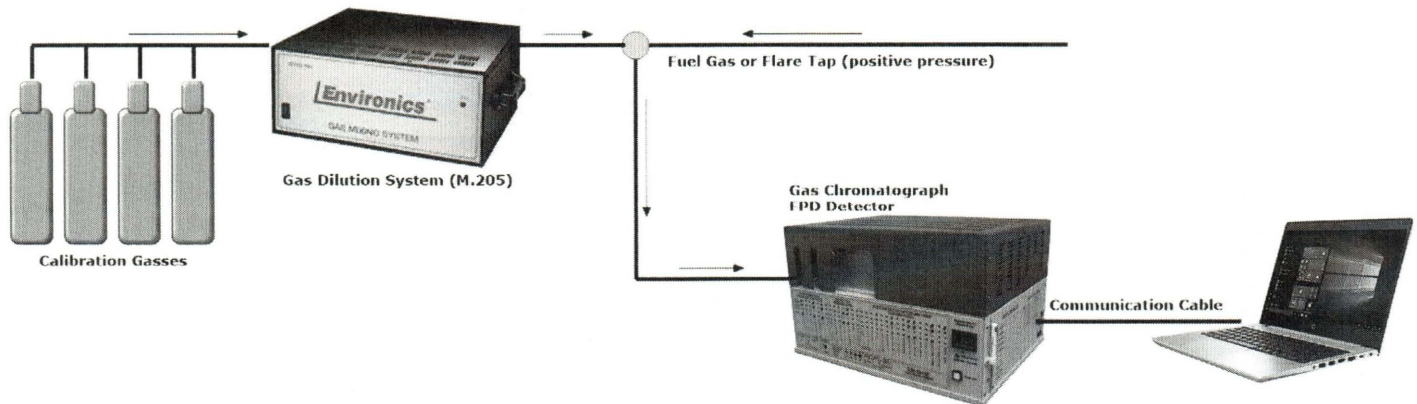
4.0 SAMPLING AND ANALYTICAL PROCEDURES

Erthwrks completed this CEMS audit project utilizing all applicable test methods specified in the USEPA Title 40 CFR Part 60, Appendix A and B. Specifically, this emission testing program entailed the execution of the 40 CFR Part 60, Appendix B, Performance Specifications 7. These documents define the specifications and test procedures for H₂S CEMS. The RATA required by these regulations was conducted utilizing a mobile emission testing laboratory.

4.1 Gaseous Sampling – H₂S

The analysis of the sample stream was conducted following all procedures as specified in USEPA Method 15. For this, Erthwrks utilized an SRI Model 8610 Gas Chromatograph (GC) equipped with an FPD detector. This instrumentation is able to separate and analyze separately each individual component. Three calibration gas concentrations, using a calibration gas dilution system, were sent to the GC and analyzed in triplicate. These triplicate values were recorded and averaged. A graphical plot of concentration versus the calibration area values was created and used to calculate the concentration of the sample. All data from this analysis and all raw gas chromatograph shots are found in Attachment B. Post-test analysis of the mid-calibration standard was performed and found to be within 5% of the original curve, therefore no additional quality assurance measurements were necessary. EPA Method 205 was utilized to dilute the H₂S calibration gas.

The figure below summarizes the Erthwrks GC Sampling System:



4.2 RATA Procedures

The RATA test is a direct comparison of the CEMS monitoring data with that data collected from an independently operated EPA reference method tests for each pollutant, following all the quality assurance and quality control procedures as required in the particular method. As required by the RATA test procedures, a minimum of nine (9) EPA reference method tests were conducted for each pollutant monitored by the CEMS system. Each of

these test runs were conducted for minimum duration of thirty (30) minutes. The results of these reference method tests were compared to CEMS measurement data from the facility data acquisition and handling system (DAHS) from the same time periods to determine the relative accuracy of the CEMS. The results of the RATA test are considered acceptable if the calculated relative accuracy when compared directly to the reference method does not exceed 20.0%. Alternatively, for affected units where the average of the reference method measurements is less than 50 percent of the emission standard, as in this case, the relative accuracy should not exceed 10% with respect to the applicable standard.

4.3 Discussion of sampling procedure or operational variances

Erthwrks, Inc. conducted the emission testing with no sampling or procedural variances. The Alky Flare operated with no operational variances.

Attachment A
Detailed Results of Emission Test

Erthwrks Relative Accuracy Test Audit--H₂S RATA Performance Specification 7

Alky Flare

H₂S RATA--Pe

Test Run	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8
Date	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022
Start Time	19:20	19:50	20:20	20:50	21:20	21:50	22:20	22:50
End Time	19:50	20:20	20:50	21:20	21:50	22:20	22:50	23:20
RM H ₂ S (ppmw)	0.21	0.21	0.21	3.10	0.52	0.83	1.53	0.87
CEMS H ₂ S (ppmw)	3.15	3.03	2.95	2.92	2.98	3.11	3.13	3.09
Abs. Diff.	-2.94	-2.82	-2.74	0.18	-2.46	-2.28	-1.60	-2.22
Accept or Reject	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept

Applicable Standard (ppmv)

162

Mean of the Difference (d_{avg})

-2.11

Standard Deviation (S_d)

0.95

Confidence Coefficient (CC)

0.73

Relative Accuracy via AS, RA_{AS}

1.75%

← Pass

*RA_{RM} (Reference Method) must be less than 20%, or

†RA_{AS} (Applicable Standard) must be less than 10%

Attachment B
Calibration, QAQC, and Raw Data

Erthwrks GC Calibration and Analysis Data

Date: 10/5/2022 - 10/6/2022
Client: Marathon Petroleum
Facility: Detroit Refinery
Location: Complex 2
Unit ID: Alky Flare
Erthwrks Tech: JH, TC, AS

Initial Calibration

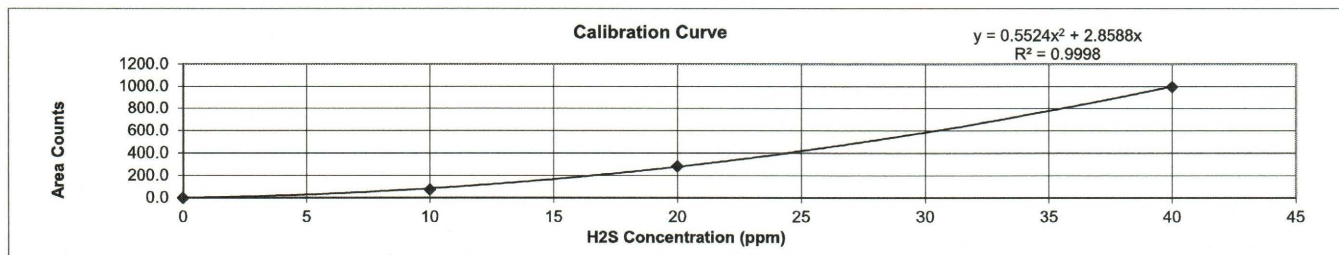
H2S Concentration	0			
GC Results	0.3	0.1	0.2	0.1
Average Response	0.16			
Standard Deviation	0.07			
MDL (3 times standard deviation)	0.21			

H2S Concentration	40		
GC Results	986.2	996.0	1009.2
% Diff	1.10%	0.11%	-1.21%
Average Response	997.13		

H2S Concentration	20		
GC Results	282.0	285.4	286.0
% Diff	0.87%	-0.33%	-0.54%
Average Response	284.47		

H2S Concentration	10		
GC Results	75.6	74.6	76.0
% Diff	-0.28%	1.08%	-0.80%
Average Response	75.39		

Sample Line Loss	20		
GC Results	291.7	295.9	294.2
% Diff	0.76%	-0.67%	-0.09%
Average Response	293.90		
<20% of Direct	-3.32%		



Data from Calibration Curve

a:	0.5524	0.21 MDL
b:	2.8588	
R ² :	0.9998	
c:	0	

Test Runs

Run 1 Time	START	END	
	19:20	19:50	
Run 1 GC Response	0.1	0.1	0.1
Average Response	0.1		
Run Result	0.0 ppm		0.2 ppm

Run 2 Time	START	END	
	19:50	20:20	
Run 2 GC Response	0.1	0.1	0.1
Average Response	0.1		
Run Result	0.0 ppm		0.2 ppm

Run 3 Time	START	END	
	20:20	20:50	
Run 3 GC Response	0.1	0.1	0.1
Average Response	0.1		
Run Result	0.0 ppm		0.2 ppm

Erthwrks GC Calibration and Analysis Data

Date: 10/5/2022 - 10/6/2022
Client: Marathon Petroleum
Facility: Detroit Refinery
Location: Complex 2
Unit ID: Alky Flare
Erthwrks Tech: JH, TC, AS

	START	END	
Run 4 Time	20:50	21:20	
Run 4 GC Response	0.1	3.2	39.1
Average Response	14.2		
Run Result	3.1 ppm		3.1 ppm

	START	END	
Run 5 Time	21:20	21:50	
Run 5 GC Response	0.2	1.9	2.9
Average Response	1.6		
Run Result	0.5 ppm		0.5 ppm

	START	END	
Run 6 Time	21:50	22:20	
Run 6 GC Response	3.4	3.4	1.5
Average Response	2.8		
Run Result	0.8 ppm		0.8 ppm

	START	END	
Run 7 Time	22:20	22:50	
Run 7 GC Response	3.8	6.3	6.9
Average Response	5.7		
Run Result	1.5 ppm		1.5 ppm

	START	END	
Run 8 Time	22:50	23:20	
Run 8 GC Response	0.2	2.3	6.3
Average Response	2.9		
Run Result	0.9 ppm		0.9 ppm

	START	END	
Run 9 Time	23:20	23:50	
Run 9 GC Response	2.1	2.7	4.2
Average Response	3.0		
Run Result	0.9 ppm		0.9 ppm

	START	END	
Run 10 Time	23:50	0:20	
Run 10 GC Response	1.5	0.3	0.9
Average Response	0.9		
Run Result	0.3 ppm		0.3 ppm

Post Cal GC Response	286.6	287.0	284.2
Average Response	285.9		
% Difference	-0.52%	PASS Post Test Calibration Check	

Erthwrks Gaseous Sample Collection and Quality Assurance Worksheet

Date: 10/5/2022
 Client: Marathon Petroleum
 Facility: Detroit Refinery
 Location: Complex 2
 Unit ID: Alky Flare
 Erthwrks Tech: JH, TC, AS

Method 205 Field Evaluation for H2S Calibration Gas

Dilution Calibrator Verification					Direct Cal.	Dilutor & Method 205 Gases	
Pred. Conc.	95.0	%Diff from Avg.	45.0	%Diff from Avg.	50.36	Dilutor S/N:	9144
Instrument Res 1	96.18	0.18%	45.35	-0.41%	50.17	Root Gas Conc:	965.6
Instrument Res 2	96.02	0.35%	45.01	0.35%	50.02	Root Gas Cyl. #:	CC418906
Instrument Res 3	96.87	-0.54%	45.14	0.06%	50.38	Direct Gas Conc:	50.36
Average Response	96.36	n/a	45.17	n/a	50.19	Direct Gas Cyl. #:	CC429848
%Diff from Pred.	1.41%	n/a	0.37%	n/a	-0.34%		

TimeStamp	Project Number	Client	Facility	Unit	Test Period	CO
10/5/2022 7:48	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		90.751
10/5/2022 7:49	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare	Dilution 1	96.183
10/5/2022 7:50	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		86.167
10/5/2022 7:51	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		47.775
10/5/2022 7:52	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare	Dilution 2	45.354
10/5/2022 7:53	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		46.435
10/5/2022 7:54	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		49.301
10/5/2022 7:55	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare	Direct Cal	50.171
10/5/2022 7:56	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		37.942
10/5/2022 7:57	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		77.923
10/5/2022 7:58	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		94.353
10/5/2022 7:59	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare	Dilution 1	96.018
10/5/2022 8:00	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		96.282
10/5/2022 8:01	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		56.533
10/5/2022 8:02	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		44.924
10/5/2022 8:03	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare	Dilution 2	45.012
10/5/2022 8:04	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		32.267
10/5/2022 8:05	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		11.798
10/5/2022 8:06	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		15.77
10/5/2022 8:07	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		45.621
10/5/2022 8:08	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare	Direct Cal	50.02
10/5/2022 8:09	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		32.574
10/5/2022 8:10	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		84.465
10/5/2022 8:11	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		96.608
10/5/2022 8:12	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare	Dilution 1	96.874
10/5/2022 8:13	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		68.878
10/5/2022 8:14	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		45.139
10/5/2022 8:15	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare	Dilution 2	45.14
10/5/2022 8:16	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		42.847
10/5/2022 8:17	9049.1.D1	Marathon Petroleum	Detroit Refinery	Alky Flare		47.936



Erthwrks Raw Datalogs

<u>Chromatogram #</u>	<u>Date</u>	<u>Time</u>	<u>Test Period</u>	<u>Pollutant</u>	<u>Retention</u>	<u>Area Count</u>
EP FG47.chr	10/5/2022	12:35:42		H2S	0.886	272.3
EP FG48.chr	10/5/2022	12:37:19		H2S	0.876	309.4
EP FG49.chr	10/5/2022	12:38:24		H2S	0.89	305.7
EP FG50.chr	10/5/2022	12:39:31		H2S	0.883	272.1
EP FG51.chr	10/5/2022	12:43:04		H2S	0.886	257.4
EP FG52.chr	10/5/2022	12:44:24		H2S	0.883	275.5
EP FG53.chr	10/5/2022	12:45:29	20 ppm Cal	H2S	0.883	282.0
EP FG54.chr	10/5/2022	12:46:40	20 ppm Cal	H2S	0.873	285.4
EP FG55.chr	10/5/2022	12:47:50	20 ppm Cal	H2S	0.88	286.0
EP FG56.chr	10/5/2022	12:50:04		H2S	0.873	268.8
EP FG57.chr	10/5/2022	12:51:10		H2S	0.873	982.3
EP FG58.chr	10/5/2022	12:52:17	40 ppm Cal	H2S	0.87	986.2
EP FG59.chr	10/5/2022	12:53:23	40 ppm Cal	H2S	0.87	996.0
EP FG60.chr	10/5/2022	12:54:29	40 ppm Cal	H2S	0.883	1009.2
EP FG61.chr	10/5/2022	12:55:35		H2S	0.883	105.3
EP FG62.chr	10/5/2022	12:56:41		H2S	0.873	77.3
EP FG63.chr	10/5/2022	12:57:47	10 ppm Cal	H2S	0.876	75.6
EP FG64.chr	10/5/2022	12:58:53	10 ppm Cal	H2S	0.88	74.6
EP FG65.chr	10/5/2022	12:59:59	10 ppm Cal	H2S	0.873	76.0
EP FG66.chr	10/5/2022	13:01:05		H2S	0.87	381.4
EP FG67.chr	10/5/2022	13:02:11	Zero Cal MDL	H2S	0.913	0.3
EP FG68.chr	10/5/2022	13:03:18	Zero Cal MDL	H2S	0.87	0.1
EP FG69.chr	10/5/2022	13:04:24	Zero Cal MDL	H2S	0.926	0.2
EP FG70.chr	10/5/2022	13:05:30	Zero Cal MDL	H2S	0.88	0.1
EP FG71.chr	10/5/2022	13:06:57		H2S	0.886	269.3
EP FG72.chr	10/5/2022	13:08:03		H2S	0.88	292.4
EP FG73.chr	10/5/2022	13:09:09	Sample Line Loss	H2S	0.88	291.7
EP FG74.chr	10/5/2022	13:10:15	Sample Line Loss	H2S	0.873	295.9
EP FG75.chr	10/5/2022	13:11:21	Sample Line Loss	H2S	0.873	294.2
Alky Flare01.chr	10/5/2022	19:03:20		H2S	0.893	0.1
Alky Flare03.chr	10/5/2022	19:09:51		H2S	0.88	0.0
Alky Flare04.chr	10/5/2022	19:19:51	Run 1	H2S	0.913	0.1
Alky Flare05.chr	10/5/2022	19:29:51	Run 1	H2S	0.903	0.1
Alky Flare06.chr	10/5/2022	19:39:51	Run 1	H2S	0.853	0.1
Alky Flare07.chr	10/5/2022	19:49:51	Run 2	H2S	0.883	0.1
Alky Flare08.chr	10/5/2022	19:59:52	Run 2	H2S	0.92	0.1
Alky Flare09.chr	10/5/2022	20:09:52	Run 2	H2S	0.873	0.1
Alky Flare10.chr	10/5/2022	20:19:52	Run 3	H2S	0.923	0.1
Alky Flare11.chr	10/5/2022	20:29:52	Run 3	H2S	0.906	0.1
Alky Flare12.chr	10/5/2022	20:39:52	Run 3	H2S	0.89	0.1
Alky Flare13.chr	10/5/2022	20:49:52	Run 4	H2S	0.916	0.1
Alky Flare14.chr	10/5/2022	20:59:52	Run 4	H2S	0.89	3.2
Alky Flare15.chr	10/5/2022	21:09:53	Run 4	H2S	0.866	39.1
Alky Flare16.chr	10/5/2022	21:19:53	Run 5	H2S	0.866	0.2
Alky Flare17.chr	10/5/2022	21:29:53	Run 5	H2S	0.886	1.9
Alky Flare18.chr	10/5/2022	21:39:53	Run 5	H2S	0.926	2.9
Alky Flare19.chr	10/5/2022	21:49:53	Run 6	H2S	0.88	3.4
Alky Flare20.chr	10/5/2022	21:59:53	Run 6	H2S	0.896	3.4
Alky Flare21.chr	10/5/2022	22:09:53	Run 6	H2S	0.85	1.5
Alky Flare22.chr	10/5/2022	22:19:53	Run 7	H2S	0.9	3.8
Alky Flare23.chr	10/5/2022	22:29:53	Run 7	H2S	0.853	6.3
Alky Flare24.chr	10/5/2022	22:39:54	Run 7	H2S	0.88	6.9

Erthwrks Raw Datalogs

<u>Chromatogram #</u>	<u>Date</u>	<u>Time</u>	<u>Test Period</u>	<u>Pollutant</u>	<u>Retention</u>	<u>Area Count</u>
Alky Flare25.chr	10/5/2022	22:49:54	Run 8	H2S	0.873	0.2
Alky Flare26.chr	10/5/2022	22:59:54	Run 8	H2S	0.906	2.3
Alky Flare27.chr	10/5/2022	23:09:54	Run 8	H2S	0.9	6.3
Alky Flare28.chr	10/5/2022	23:19:54	Run 9	H2S	0.856	2.1
Alky Flare29.chr	10/5/2022	23:29:54	Run 9	H2S	0.91	2.7
Alky Flare30.chr	10/5/2022	23:39:54	Run 9	H2S	0.853	4.2
Alky Flare31.chr	10/5/2022	23:49:54	Run 10	H2S	0.913	1.5
Alky Flare32.chr	10/5/2022	23:59:55	Run 10	H2S	0.896	0.3
Alky Flare33.chr	10/6/2022	0:09:55	Run 10	H2S	0.863	0.9
Alky Flare34.chr	10/6/2022	0:19:55		H2S	0.873	0.7
Alky Flare35.chr	10/6/2022	0:29:55		H2S	0.9	1.5
Alky Flare36.chr	10/6/2022	0:39:55		H2S	0.863	0.8
Alky Flare37.chr	10/6/2022	0:49:55		H2S	0.926	1.6
Alky Flare38.chr	10/6/2022	0:59:55		H2S	0.86	1.1
Alky Flare39.chr	10/6/2022	1:09:55		H2S	0.923	0.6
Alky Flare40.chr	10/6/2022	1:19:56		H2S	0.873	0.7
Alky Flare41.chr	10/6/2022	1:29:56		H2S	0.85	0.8
Alky Flare42.chr	10/6/2022	1:39:56		H2S	0.88	0.9
Alky Flare43.chr	10/6/2022	1:49:56		H2S	0.86	1.6
Alky Flare44.chr	10/6/2022	1:59:56		H2S	0.873	1.7
Alky Flare45.chr	10/6/2022	2:09:56		H2S	0.866	1.1
Alky Flare46.chr	10/6/2022	2:19:56		H2S	0.873	1.2
Alky Flare47.chr	10/6/2022	2:29:56		H2S	0.89	1.1
Alky Flare48.chr	10/6/2022	2:39:57		H2S	0.856	0.6
Alky Flare49.chr	10/6/2022	2:49:57		H2S	0.9	1.1
Alky Flare50.chr	10/6/2022	2:59:57		H2S	0.916	0.6
Alky Flare51.chr	10/6/2022	3:09:57		H2S	0.886	0.9
Alky Flare52.chr	10/6/2022	3:19:57		H2S	0.89	1.8
Alky Flare53.chr	10/6/2022	3:29:57		H2S	0.91	1.1
Alky Flare54.chr	10/6/2022	3:39:57		H2S	0.86	0.7
Alky Flare55.chr	10/6/2022	3:49:57		H2S	0.87	1.0
Alky Flare56.chr	10/6/2022	3:59:57		H2S	0.88	0.8
Alky Flare57.chr	10/6/2022	4:09:57		H2S	0.893	0.8
Alky Flare58.chr	10/6/2022	4:19:57		H2S	0.86	0.7
Alky Flare59.chr	10/6/2022	4:29:58		H2S	0.866	1.5
Alky Flare60.chr	10/6/2022	4:39:58		H2S	0.866	1.1
Alky Flare61.chr	10/6/2022	4:49:58		H2S	0.87	1.0
Alky Flare62.chr	10/6/2022	4:59:58		H2S	0.91	1.3
Alky Flare64.chr	10/6/2022	6:40:49		H2S	0.913	0.3
Alky Flare65.chr	10/6/2022	6:42:35		H2S	0.85	160.4
Alky Flare66.chr	10/6/2022	6:44:00		H2S	0.856	199.7
Alky Flare67.chr	10/6/2022	6:45:33		H2S	0.843	238.9
Alky Flare68.chr	10/6/2022	6:46:39	Post Cal	H2S	0.84	286.6
Alky Flare69.chr	10/6/2022	6:47:45	Post Cal	H2S	0.843	287.0
Alky Flare70.chr	10/6/2022	6:48:51	Post Cal	H2S	0.85	284.2

Attachment C
Certificates

Accredited Air Emission Testing

A2LA has accredited

ERTHWRKS, INC.

In recognition of the successful completion of the joint A2LA and Stack Testing Accreditation Co evaluation process, this laboratory is accredited to perform testing activities in compliance ASTM D7036:2004 - Standard Practice for Competence of Air Emission Testing Bodies.



Presented this 29th day of March 2021.



Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 6147.01
Valid to March 31, 2023

This accreditation program is not included under the A2LA ILAC Mutual Recognition Arrangement



69 Industrial Park Rd E, Tolland CT 06084
<https://www.environics.com/service-request>
 (860) 872-1111 info@environics.com

ENVIRONICS FLOW CONTROLLER CALIBRATION REPORT

Unit Summary		Std Conditions		MFC Summary	
Model #:	S4040	Temp:	32°F	MFC #:	1
Unit SN :	9144	Pressure:	29.92 in. Hg	MFC FS Flow:	10000
		Gas:	NITROGEN	MFC S/N:	0995030001

Flow Calibration Data is not performance data. This data is used by the system operating mode to improve the flow accuracy. The Flow Verification Data is performance data.

Flow Calibration Data

	Set Flow	True Flow
5%	500	535.942
10%	1000	1068.271
20%	2000	2140.081
30%	3000	3190.149
40%	4000	4216.403
50%	5000	5248.716
60%	6000	6260.214
70%	7000	7247.619
80%	8000	8247.958
90%	9000	9235.485
100%	10000	10230.140

All values in SCCM

Flow Verification Data

	Set Flow	True Flow	% dev
99%	9900	9929.928	0.30%
85%	8500	8520.603	0.24%
55%	5500	5500.753	0.01%
25%	2500	2507.681	0.31%
10%	1000	1001.440	0.14%

All values in SCCM

This calibration complies with ISO 17025-2005 [non-accredited] and is traceable to the National Institute of Standards and Technology (NIST). Calibration and verification are accomplished exclusively by qualified personnel following controlled procedures under ISO 9001:2015. For questions or concerns, contact Customer Service via our website, email or by phone, weekdays from 8AM - 4PM.

Verified by: Ashtu Ahmad

Date: 8-14-22



69 Industrial Park Rd E, Tolland CT 06084
https://www.environics.com/service-request
(860) 872-1111 info@environics.com

ENVIRONICS FLOW CONTROLLER CALIBRATION REPORT

Unit Summary		Std Conditions		MFC Summary	
Model #:	S4040	Temp:	32°F	MFC #:	2
Unit SN :	9144	Pressure:	29.92 in. Hg	MFC FS Flow:	4000
		Gas:	NITROGEN	MFC S/N:	0995032001

Flow Calibration Data is not performance data. This data is used by the system operating mode to improve the flow accuracy. The Flow Verification Data is performance data.

Flow Calibration Data

	Set Flow	True Flow
5%	200	209.074
10%	400	420.913
20%	800	842.487
30%	1200	1265.189
40%	1600	1678.978
50%	2000	2082.343
60%	2400	2475.043
70%	2800	2884.917
80%	3200	3260.854
90%	3600	3651.022
100%	4000	4051.684

All values in SCCM

Flow Verification Data

	Set Flow	True Flow	% dev
99%	3960	3976.419	0.41%
85%	3400	3413.736	0.40%
55%	2200	2210.047	0.46%
25%	1000	1000.119	0.01%
10%	400	399.975	-0.01%

All values in SCCM

This calibration complies with ISO 17025-2005 [non-accredited] and is traceable to the National Institute of Standards and Technology (NIST). Calibration and verification are accomplished exclusively by qualified personnel following controlled procedures under ISO 9001:2015. For questions or concerns, contact Customer Service via our website, email or by phone, weekdays from 8AM - 4PM.

Verified by: *Ashley A. Thomas*

Date: 8-16-22



69 Industrial Park Rd E, Tolland CT 06084
 https://www.environics.com/service-request
 (860) 872-1111 info@environics.com

ENVIRONICS FLOW CONTROLLER CALIBRATION REPORT

Unit Summary		Std Conditions		MFC Summary	
Model #:	S4040	Temp:	32°F	MFC #:	4
Unit SN :	9144	Pressure:	29.92 in. Hg	MFC FS Flow:	40
		Gas:	NITROGEN	MFC S/N:	0995036001

Flow Calibration Data is not performance data. This data is used by the system operating mode to improve the flow accuracy. The Flow Verification Data is performance data.

Flow Calibration Data

	Set Flow	True Flow
5%	2	1.817
10%	4	3.905
20%	8	8.055
30%	12	12.163
40%	16	16.314
50%	20	20.438
60%	24	24.557
70%	28	28.677
80%	32	32.799
90%	36	36.927
100%	40	40.977

All values in SCCM

Flow Verification Data

	Set Flow	True Flow	% dev
99%	39.6	39.669	0.17%
85%	34	33.973	-0.08%
55%	22	21.989	-0.05%
25%	10	10.003	0.03%
10%	4	3.992	-0.20%

All values in SCCM

This calibration complies with ISO 17025-2005 [non-accredited] and is traceable to the National Institute of Standards and Technology (NIST). Calibration and verification are accomplished exclusively by qualified personnel following controlled procedures under ISO 9001:2015. For questions or concerns, contact Customer Service via our website, email or by phone, weekdays from 8AM - 4PM.

Verified by: 

Date: 8-16-22

CERTIFICATE OF ANALYSIS

Grade of Product: EPA PROTOCOL STANDARD

Part Number: E02NI99E15A2110	Reference Number: 160-402112379-1
Cylinder Number: CC62329	Cylinder Volume: 144.4 Cubic Feet
Laboratory: 124 - Plumsteadville - PA	Cylinder Pressure: 2015 PSIG
PGVP Number: A12021	Valve Outlet: 330
Gas Code: H2S,BALN	Certification Date: May 25, 2021

Expiration Date: May 25, 2024

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
HYDROGEN SULFIDE	1000 PPM	1007 PPM	G2	+/- 2%	05/18/2021, 05/25/2021
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
GMIS	124156356102	CC273734	953.7 PPM HYDROGEN SULFIDE/NITROGEN	+/- 0.50	Mar 25, 2024
PRM	C1940510.06	D887260	999 PPM HYDROGEN SULFIDE/NITROGEN	+/- 0.50	Jan 20, 2024

The SRM, PRM or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
AMETEK 9000 ZZ-9000-10464-1	NDUV	May 21, 2021

Triad Data Available Upon Request



Signature on file
Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Customer:	ERTHWKRS		Reference Number:	163-402095745-1
Part Number:	E04NI99E15A7125	Cylinder Volume:	144.4 CF	
Cylinder Number:	CC429848	Cylinder Pressure:	2015 PSIG	
Laboratory:	124 - Pasadena (SG06) - TX	Valve Outlet:	660	
PGVP Number:	A32021	Certification Date:	May 04, 2021	
Gas Code:	CO,NO,NOX,PPN,BALN			

Expiration Date: May 04, 2024

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	50.00 PPM	49.91 PPM	G1	+/- 1.2% NIST Traceable	04/27/2021, 05/04/2021
CARBON MONOXIDE	50.00 PPM	50.36 PPM	G1	+/- 0.8% NIST Traceable	04/27/2021
NITRIC OXIDE	50.00 PPM	49.84 PPM	G1	+/- 1.2% NIST Traceable	04/27/2021, 05/04/2021
PROPANE	50.00 PPM	50.68 PPM	G1	+/- 0.7% NIST Traceable	04/27/2021
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	10010515	AAL073265	25.54 PPM CARBON MONOXIDE/NITROGEN	+/-0.7%	Apr 13, 2022
PRM	12377	D562881	30.00 PPM NITROGEN DIOXIDE/NITROGEN	+/- 2.0%	Sep 04, 2018
NTRM	200611-29	CC733348	49.82 PPM NITRIC OXIDE/NITROGEN	+/-1.0%	Feb 02, 2025
PRM	12386	D685025	9.91 PPM NITROGEN DIOXIDE/AIR	+/-2.0%	Feb 20, 2020
GMIS	7292017105	CC506724	30.4 PPM NITROGEN DIOXIDE/AIR	+/-2.0%	Sep 03, 2021
GMIS	401648677102	CC506986	15.21 PPM NITROGEN DIOXIDE/NITROGEN	+/-2.1%	Feb 10, 2023
NTRM	17061006	ND61234	49.13 PPM PROPANE/AIR	+/-0.4%	Jul 24, 2023

The SRM, PRM or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
CO-XL-NICOLET iS50 AUP2010248	FTIR	Apr 15, 2021
NO-XL-NICOLET iS50 AUP2010248	FTIR	Apr 28, 2021
NO2-NICOLET iS50 AUP2010248	FTIR	Apr 28, 2021
C3H8-XXL-NICOLET iS50 AUP2010248	FTIR	Apr 22, 2021

Triad Data Available Upon Request



Signature on file

Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Customer:	ERTHWRKS	Reference Number:	163-401505767-1
Part Number:	E04NI99E15A7149	Cylinder Volume:	144.4 CF
Cylinder Number:	CC418906	Cylinder Pressure:	2015 PSIG
Laboratory:	124 - Pasadena (SG06) - TX	Valve Outlet:	660
PGVP Number:	A32019	Certification Date:	Jun 04, 2019
Gas Code:	CO,NO,NOX,PPN,BALN		

Expiration Date: Jun 04, 2027

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a mole/mole basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	950.0 PPM	952.4 PPM	G1	+/- 0.8% NIST Traceable	05/28/2019, 06/04/2019
CARBON MONOXIDE	950.0 PPM	965.6 PPM	G1	+/- 0.5% NIST Traceable	05/28/2019
NITRIC OXIDE	950.0 PPM	952.4 PPM	G1	+/- 0.8% NIST Traceable	05/28/2019, 06/04/2019
PROPANE	950.0 PPM	960.9 PPM	G1	+/- 0.6% NIST Traceable	05/28/2019
NITROGEN	Balance				

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	09010306	KAL004473	970.0 PPM CARBON MONOXIDE/NITROGEN	+/-0.4%	May 14, 2021
PRM	12377	D562881	30.00 PPM NITROGEN DIOXIDE/NITROGEN	+/- 2.0%	Sep 04, 2018
NTRM	08011740	KAL004072	970.9 PPM NITRIC OXIDE/NITROGEN	+/-0.6%	Apr 16, 2024
GMIS	7292017105	CC506724	30.4 PPM NITROGEN DIOXIDE/AIR	+/-2.0%	Sep 03, 2021
NTRM	15060808	CC462511	992.3 PPM PROPANE/NITROGEN	+/-0.6%	Jul 22, 2021

The SRM, PRM or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
CO-M - NICOLET 6700 AHR0600411	FTIR	May 16, 2019
NO-M - NICOLET 6700 AHR0600411	FTIR	May 30, 2019
NO2 - NICOLET 6700 AHR0600411	FTIR	May 30, 2019
C3H8-L-NICOLET 6700 AHR0600411	FTIR	May 22, 2019

Triad Data Available Upon Request



Signature on file
Approved for Release

Attachment D
Example Calculations

Erthwrks RATA Example Calculations

Example Calculations for H₂S RATA

Arithmetic Mean--Mean of the Difference between reference method and client CEMS, d_{avg}

$$d_{avg} = \frac{1}{n} \sum_{i=1}^n d_i \quad \text{Eq. 2-3}$$

where: d = absolute difference between reference method and client CEMS
 i = run number

$d_1 =$	-2.94	$d_4 =$	0.18	$d_7 =$	-1.60	$d_{10} =$	0
$d_2 =$	-2.82	$d_5 =$	-2.46	$d_8 =$	-2.22	$d_{11} =$	0
$d_3 =$	-2.74	$d_6 =$	-2.28	$d_9 =$	-2.10	$d_{12} =$	0

n = number of runs = **9**

$d_{avg} =$ **-2.11**

Standard Deviation, S_d

$$S_d = \sqrt{\frac{\sum_{i=1}^n d_i^2 - \frac{[\sum_{i=1}^n d_i]^2}{n}}{n-1}} \quad \text{Eq. 2-4}$$

$$S_d = \left(\frac{4.73E+01 - \frac{3.60E+02}{9}}{8} \right)^{1/2}$$

$S_d =$ **0.95**

Confidence Coefficient, CC

$$CC = t_{0.975} \frac{S_d}{n^{1/2}} \quad \text{Eq. 2-5}$$

where: $t_{0.975} =$ **2.306**

$$CC = 2.306 * \frac{9.52E-01}{3}$$

$CC =$ **0.73**

Relative Accuracy, RA_{AS}

$$RA_{AS} = \frac{|d_{avg}| + |CC|}{AS} \times 100 \quad \text{Eq. 2-6}$$

where: AS = the unit's permit limit or applicable standard
 $AS =$ **162**

$$RA_{AS} = \frac{2.1089 + 7.32E-1}{162} * 100$$

$RA_{AS} =$ **1.75%**

Erthwrks Example Calculations

Example Calcs : Fuel gas

Example Calcs for Pollutant : H₂S

C_V	= 40.0	= Low Level Target concentration of calibration gas, ppmv.
C_{Dir}	= 20.0	= Mid Level Target concentration of calibration gas, ppmv.
CS	= 10.0	= High Level Target concentration of calibration gas, ppmv.
C_S	= 997.1	= Low Level Average GC Response
SB_i	= 284.5	= Mid Level Average GC Response
SB_f	= 75.4	= High Level Average GC Response

GC Calibration Curve (Polynomial Excel Generated)

$$y = ax^2 + bx + c$$

where:	a =	0.5524
	b =	2.8588
	c =	0

Run 1 Example Calculation

$$y = 0.120 \quad (\text{average response Run 1})$$

$$\text{solution} = x = \frac{-b + [b^2 - 4(a)(c-y)]^{1/2}}{2(a)}$$

where:	a =	0.5524
	b =	2.8588
	c =	0.000 (c - y)

$$x = \frac{-2.8588 + [2.86^2 - 4(0.5524)(-0.12)]^{1/2}}{2(0.5524)}$$

$$x = 0.04 \text{ ppmv}$$

Attachment E
CEMS Data

CEMS Data

Run #	Date/Time	H2S (ppm)	CZ NHV (Btu/SCF)	S/VG	Vent Gas Volume Flow (SCFH)	Vent Gas Mass Flow (PPH)	NHV of VG(Btu/SCF)
		09AI0994H	09AI0991K	09FFI0992A	09FI0992C	09FI0992H	09AI0991B_B
1	10/5/2022 19:20	3.23	364.03	1.84	13872.42	681.53	986.08
	10/5/2022 19:21	3.23	364.45	1.84	14284.52	679.96	985.92
	10/5/2022 19:22	3.23	362.62	1.83	14378.06	678.39	985.75
	10/5/2022 19:23	3.23	360.78	1.82	14474.91	673.90	985.58
	10/5/2022 19:24	3.23	358.46	1.82	14347.52	671.61	985.67
	10/5/2022 19:25	3.22	358.99	1.83	14593.30	670.14	985.87
	10/5/2022 19:26	3.23	361.30	1.83	14911.77	668.66	986.07
	10/5/2022 19:27	3.23	365.40	1.84	14430.47	667.18	986.26
	10/5/2022 19:28	3.23	364.57	1.85	14269.48	665.71	986.46
	10/5/2022 19:29	3.23	363.17	1.85	14205.58	664.23	986.66
	10/5/2022 19:30	3.23	361.77	1.86	14420.27	662.75	986.85
	10/5/2022 19:31	3.23	360.36	1.87	14375.56	661.28	987.05
	10/5/2022 19:32	3.23	357.84	1.87	14351.98	659.80	987.25
	10/5/2022 19:33	3.05	355.28	1.87	14564.40	659.43	987.47
	10/5/2022 19:34	2.97	352.93	1.86	14587.67	661.91	987.77
	10/5/2022 19:35	2.97	352.16	1.85	14259.29	664.54	988.06
	10/5/2022 19:36	2.96	358.77	1.84	14078.56	667.17	988.35
	10/5/2022 19:37	2.96	359.83	1.83	14042.12	669.80	988.64
	10/5/2022 19:38	2.97	360.88	1.82	14086.80	672.43	988.93
	10/5/2022 19:39	2.96	361.94	1.81	14179.96	675.06	989.22
	10/5/2022 19:40	3.10	363.06	1.81	14299.28	677.69	989.51
	10/5/2022 19:41	3.19	365.51	1.80	14421.49	680.31	989.80
	10/5/2022 19:42	3.19	363.18	1.79	14331.60	682.94	990.10
	10/5/2022 19:43	3.20	360.85	1.82	14551.37	685.96	990.35
	10/5/2022 19:44	3.20	357.61	1.86	14635.24	684.04	990.15
	10/5/2022 19:45	3.20	357.74	1.86	14580.05	681.29	989.81
	10/5/2022 19:46	3.20	359.23	1.85	14396.14	678.54	989.47
	10/5/2022 19:47	3.15	360.71	1.85	14390.85	675.79	989.13
	10/5/2022 19:48	3.08	362.58	1.84	14748.99	673.04	988.80
	10/5/2022 19:49	3.08	358.63	1.83	14592.96	670.29	988.46
	10/5/2022 19:50						
Run average		3.15	360.49	1.84	14388.75	672.18	987.85

Run #	Date/Time	H2S (ppm)	CZ NHV (Btu/SCF)	S/VG	Vent Gas Volume Flow (SCFH)	Vent Gas Mass Flow (PPH)	NHV of VG(Btu/SCF)
		09AI0994H	09AI0991K	09FFI0992A	09FI0992C	09FI0992H	09AI0991B_B
2	10/5/2022 19:50	3.08	363.51	1.82	14449.43	667.54	988.12
	10/5/2022 19:51	3.08	360.05	1.81	14302.88	664.79	987.78
	10/5/2022 19:52	3.08	362.20	1.80	14381.16	662.04	987.45
	10/5/2022 19:53	3.08	365.47	1.79	14546.97	659.13	987.10
	10/5/2022 19:54	3.10	367.10	1.78	14701.80	658.39	986.89
	10/5/2022 19:55	3.13	365.67	1.80	14891.13	658.18	986.80
	10/5/2022 19:56	3.13	364.24	1.82	14741.97	657.96	986.72
	10/5/2022 19:57	3.14	362.81	1.83	14447.58	657.74	986.64
	10/5/2022 19:58	3.14	361.39	1.85	14300.81	657.53	986.56
	10/5/2022 19:59	3.14	359.44	1.87	14565.48	657.31	986.47
	10/5/2022 20:00	3.14	357.73	1.88	14434.73	657.09	986.39
	10/5/2022 20:01	3.05	356.16	1.88	14094.05	656.88	986.31
	10/5/2022 20:02	2.77	354.59	1.88	14406.67	656.66	986.22
	10/5/2022 20:03	2.77	352.48	1.88	14139.31	654.74	986.15
	10/5/2022 20:04	2.77	352.21	1.88	13928.48	657.40	986.32
	10/5/2022 20:05	2.77	356.62	1.88	14178.81	661.74	986.59
	10/5/2022 20:06	2.77	359.66	1.88	14482.96	666.08	986.86
	10/5/2022 20:07	2.77	360.81	1.88	14479.68	670.42	987.12
	10/5/2022 20:08	2.83	361.96	1.88	14724.18	674.76	987.39
	10/5/2022 20:09	3.18	363.11	1.88	14598.84	679.10	987.66
	10/5/2022 20:10	3.18	364.26	1.85	14524.33	683.44	987.92
	10/5/2022 20:11	3.18	365.50	1.81	14822.14	687.79	988.19
	10/5/2022 20:12	3.18	366.35	1.78	14265.86	692.13	988.46
	10/5/2022 20:13	3.18	365.41	1.79	14101.07	695.40	988.72
	10/5/2022 20:14	3.18	364.47	1.80	14504.90	695.15	988.78
	10/5/2022 20:15	3.17	363.52	1.81	14645.05	694.66	988.72
	10/5/2022 20:16	3.00	362.58	1.82	14655.36	694.16	988.67
	10/5/2022 20:17	3.00	361.63	1.83	14365.20	693.67	988.61
	10/5/2022 20:18	3.00	360.69	1.84	14301.44	693.18	988.56
	10/5/2022 20:19	3.00	359.74	1.85	14011.73	692.68	988.50
	10/5/2022 20:20						
Run average		3.03	361.38	1.84	14433.13	671.92	987.42

CEMS Data

Run #	Date/Time	H2S (ppm) 09AI0994H	CZ NHV (Btu/SCF) 09AI0991K	S/VG 09FFI0992A	Vent Gas Volume Flow (SCFH) 09FI0992C	Vent Gas Mass Flow (PPH) 09FI0992H	NHV of VG(Btu/SCF) 09AI0991B_B
3	10/5/2022 20:20	3.00	357.25	1.87	13854.14	692.19	988.45
	10/5/2022 20:21	3.00	359.11	1.85	13637.36	691.69	988.39
	10/5/2022 20:22	3.00	361.47	1.83	13989.13	691.20	988.34
	10/5/2022 20:23	2.96	365.20	1.79	14612.58	690.59	988.28
	10/5/2022 20:24	2.95	377.92	1.70	13593.83	688.98	988.35
	10/5/2022 20:25	2.95	370.08	1.77	11948.46	687.18	988.64
	10/5/2022 20:26	2.95	359.85	1.84	12044.41	685.38	988.94
	10/5/2022 20:27	2.95	355.32	1.89	11766.10	683.58	989.24
	10/5/2022 20:28	2.95	352.68	1.91	12272.87	681.78	989.54
	10/5/2022 20:29	2.95	349.15	1.94	12783.18	679.98	989.84
	10/5/2022 20:30	3.01	344.25	1.96	12865.35	678.18	990.14
	10/5/2022 20:31	3.02	341.95	1.97	13289.18	676.37	990.44
	10/5/2022 20:32	3.02	359.48	1.89	14140.42	674.57	990.74
	10/5/2022 20:33	3.02	363.26	1.83	14143.04	676.59	991.04
	10/5/2022 20:34	3.02	361.97	1.77	15669.99	674.45	992.55
	10/5/2022 20:35	3.02	381.15	1.65	15782.34	668.63	996.68
	10/5/2022 20:36	3.03	411.08	1.54	15609.13	662.82	1000.89
	10/5/2022 20:37	2.85	397.00	1.59	14532.12	657.00	1006.78
	10/5/2022 20:38	2.78	372.29	1.76	13180.63	651.18	1010.23
	10/5/2022 20:39	2.78	353.87	1.91	11725.22	645.37	1011.68
	10/5/2022 20:40	2.78	342.13	1.98	11319.73	639.55	1013.13
	10/5/2022 20:41	2.78	338.88	2.02	11354.87	633.73	1014.58
	10/5/2022 20:42	2.78	338.68	2.04	11091.87	627.92	1016.02
	10/5/2022 20:43	2.78	347.50	1.99	11867.14	621.55	1017.47
	10/5/2022 20:44	2.92	354.21	1.93	12351.02	621.97	1018.92
	10/5/2022 20:45	3.02	356.80	1.90	12919.51	624.62	1020.37
	10/5/2022 20:46	3.03	360.09	1.86	13925.99	627.26	1021.82
	10/5/2022 20:47	3.02	361.05	1.84	13968.40	629.91	1023.10
	10/5/2022 20:48	3.02	359.00	1.86	13831.94	632.55	1024.03
	10/5/2022 20:49	3.02	356.95	1.87	13900.42	635.20	1024.99
	10/5/2022 20:50						
Run average		2.95	360.32	1.85	13265.68	661.07	1002.12

Run #	Date/Time	H2S (ppm) 09AI0994H	CZ NHV (Btu/SCF) 09AI0991K	S/VG 09FFI0992A	Vent Gas Volume Flow (SCFH) 09FI0992C	Vent Gas Mass Flow (PPH) 09FI0992H	NHV of VG(Btu/SCF) 09AI0991B_B
4	10/5/2022 20:50	3.03	355.15	1.89	13709.28	637.85	1025.95
	10/5/2022 20:51	2.81	357.01	1.92	13600.58	640.49	1026.92
	10/5/2022 20:52	2.58	360.13	1.89	14105.41	643.14	1027.88
	10/5/2022 20:53	2.58	364.09	1.85	14236.34	643.85	1028.84
	10/5/2022 20:54	2.58	366.52	1.85	14215.84	642.30	1029.80
	10/5/2022 20:55	2.58	369.24	1.86	14152.66	641.45	1030.76
	10/5/2022 20:56	2.58	369.29	1.88	14074.29	640.60	1031.72
	10/5/2022 20:57	2.58	367.41	1.90	13807.01	639.74	1032.47
	10/5/2022 20:58	2.75	363.35	1.91	13598.99	638.89	1025.05
	10/5/2022 20:59	3.02	357.23	1.94	13264.50	638.04	1011.48
	10/5/2022 21:00	3.02	355.02	1.93	13338.27	637.18	1009.08
	10/5/2022 21:01	3.02	352.75	1.92	13552.41	636.33	1006.69
	10/5/2022 21:02	3.02	350.49	1.91	13578.57	635.48	1004.29
	10/5/2022 21:03	3.02	353.72	1.89	13687.85	636.83	1001.89
	10/5/2022 21:04	3.02	361.19	1.86	14039.56	638.46	999.49
	10/5/2022 21:05	3.00	366.92	1.81	14887.34	637.91	997.10
	10/5/2022 21:06	2.95	369.99	1.78	15358.76	637.35	995.41
	10/5/2022 21:07	2.96	372.74	1.76	15088.38	636.79	994.49
	10/5/2022 21:08	2.96	375.26	1.75	14693.33	636.23	993.57
	10/5/2022 21:09	2.95	373.67	1.77	14876.85	635.68	992.65
	10/5/2022 21:10	2.95	372.08	1.80	14614.86	635.12	991.73
	10/5/2022 21:11	2.95	369.30	1.82	14707.80	634.56	990.81
	10/5/2022 21:12	2.98	351.51	1.92	14133.19	634.00	989.89
	10/5/2022 21:13	3.11	343.60	1.93	13446.75	633.61	988.96
	10/5/2022 21:14	3.12	350.20	1.91	13546.50	636.79	988.04
	10/5/2022 21:15	3.11	355.27	1.89	13470.71	641.17	987.12
	10/5/2022 21:16	3.11	359.69	1.85	14004.44	645.54	986.74
	10/5/2022 21:17	3.12	362.05	1.83	14323.37	649.92	987.37
	10/5/2022 21:18	3.12	364.26	1.82	14221.01	654.30	988.02
	10/5/2022 21:19	3.10	369.49	1.80	14418.50	658.67	988.67
	10/5/2022 21:20						
Run average		2.92	361.95	1.86	14091.78	639.94	1005.10

CEMS Data

Run #	Date/Time	H2S (ppm)	CZ NHV (Btu/SCF)	S/VG	Vent Gas Volume Flow (SCFH)	Vent Gas Mass Flow (PPH)	NHV of VG(Btu/SCF)
		09AI0994H	09AI0991K	09FFI0992A	09FI0992C	09FI0992H	09AI0991B_B
	10/5/2022 21:20	2.97	372.30	1.79	14524.99	663.05	989.32
	10/5/2022 21:21	2.97	375.19	1.77	14375.93	667.42	989.97
	10/5/2022 21:22	2.97	368.16	1.81	14477.45	671.80	990.63
	10/5/2022 21:23	2.97	359.06	1.86	14135.85	675.43	991.28
	10/5/2022 21:24	2.97	360.21	1.85	14049.11	676.99	991.93
	10/5/2022 21:25	2.97	361.35	1.85	13832.27	678.69	992.58
	10/5/2022 21:26	2.97	362.49	1.84	13936.81	680.39	992.88
	10/5/2022 21:27	3.09	363.64	1.83	14236.17	682.09	992.45
	10/5/2022 21:28	3.10	365.01	1.83	14336.57	683.79	992.00
	10/5/2022 21:29	3.10	362.38	1.82	14368.32	685.49	991.55
	10/5/2022 21:30	3.10	360.05	1.81	14158.31	687.19	991.10
	10/5/2022 21:31	3.10	363.24	1.81	14537.70	688.89	990.65
	10/5/2022 21:32	3.10	365.71	1.80	14835.04	690.59	990.20
	10/5/2022 21:33	3.10	363.06	1.81	14708.56	692.19	989.76
	10/5/2022 21:34	2.93	360.01	1.83	14177.90	690.97	989.31
	10/5/2022 21:35	2.90	364.47	1.85	13853.08	688.77	988.86
	10/5/2022 21:36	2.90	362.13	1.87	13756.72	686.57	988.56
5	10/5/2022 21:37	2.90	358.33	1.89	14037.48	684.37	988.52
	10/5/2022 21:38	2.90	359.17	1.89	13996.50	682.17	988.48
	10/5/2022 21:39	2.90	360.01	1.88	13566.00	679.97	988.44
	10/5/2022 21:40	2.90	360.85	1.87	13401.30	677.76	988.41
	10/5/2022 21:41	2.89	361.69	1.86	13729.09	675.56	988.37
	10/5/2022 21:42	2.88	362.54	1.85	13827.49	673.36	988.33
	10/5/2022 21:43	2.88	363.38	1.83	14120.39	671.32	988.29
	10/5/2022 21:44	2.88	364.22	1.82	14335.58	671.70	988.26
	10/5/2022 21:45	2.88	365.14	1.81	14576.81	672.90	988.22
	10/5/2022 21:46	2.88	363.79	1.80	14845.75	674.11	988.15
	10/5/2022 21:47	2.88	361.82	1.80	14788.03	675.31	988.00
	10/5/2022 21:48	3.14	359.85	1.81	14384.33	676.52	987.84
	10/5/2022 21:49	3.28	359.48	1.81	13925.10	677.72	987.68
	10/5/2022 21:50						
Run average		2.98	362.96	1.83	14194.49	679.44	989.67

Run #	Date/Time	H2S (ppm)	CZ NHV (Btu/SCF)	S/VG	Vent Gas Volume Flow (SCFH)	Vent Gas Mass Flow (PPH)	NHV of VG(Btu/SCF)
		09AI0994H	09AI0991K	09FFI0992A	09FI0992C	09FI0992H	09AI0991B_B
	10/5/2022 21:50	3.29	364.86	1.82	13885.31	678.93	987.52
	10/5/2022 21:51	3.29	363.86	1.82	14277.16	680.13	987.37
	10/5/2022 21:52	3.28	362.87	1.82	13997.02	681.34	987.21
	10/5/2022 21:53	3.28	361.87	1.83	14027.68	682.41	987.05
	10/5/2022 21:54	3.28	360.87	1.83	13885.95	682.89	986.89
	10/5/2022 21:55	3.26	359.87	1.84	14179.13	683.41	986.74
	10/5/2022 21:56	3.24	358.87	1.84	14421.47	683.93	986.61
	10/5/2022 21:57	3.24	358.42	1.83	14433.96	684.45	986.65
	10/5/2022 21:58	3.24	361.73	1.82	14542.79	684.97	986.71
	10/5/2022 21:59	3.24	363.48	1.80	14585.21	685.49	986.78
	10/5/2022 22:00	3.24	360.63	1.79	14425.93	686.01	986.85
	10/5/2022 22:01	3.24	364.99	1.78	14512.70	686.53	986.92
	10/5/2022 22:02	3.10	367.63	1.76	14988.71	687.05	986.98
	10/5/2022 22:03	2.92	364.99	1.80	14799.58	686.34	987.05
	10/5/2022 22:04	2.92	361.46	1.83	14348.14	683.19	987.12
	10/5/2022 22:05	2.92	356.91	1.84	14210.28	683.97	987.18
6	10/5/2022 22:06	2.92	353.62	1.83	14039.44	684.75	987.21
	10/5/2022 22:07	2.92	358.64	1.83	14180.82	685.53	987.07
	10/5/2022 22:08	2.92	363.58	1.82	14554.59	686.32	986.91
	10/5/2022 22:09	2.96	366.68	1.82	14449.03	687.10	986.76
	10/5/2022 22:10	3.04	363.93	1.81	14726.24	687.88	986.60
	10/5/2022 22:11	3.04	361.78	1.80	15279.45	688.66	986.44
	10/5/2022 22:12	3.04	363.63	1.80	15003.92	689.45	986.28
	10/5/2022 22:13	3.04	365.48	1.79	15325.22	688.46	986.12
	10/5/2022 22:14	3.04	367.61	1.79	15585.44	680.41	985.97
	10/5/2022 22:15	3.04	366.76	1.79	15587.45	675.88	985.81
	10/5/2022 22:16	3.06	365.45	1.81	15238.13	671.35	985.69
	10/5/2022 22:17	3.14	364.13	1.82	15032.18	666.81	985.63
	10/5/2022 22:18	3.14	362.82	1.83	14803.77	662.28	985.57
	10/5/2022 22:19	3.14	365.39	1.84	14128.34	657.75	985.51
	10/5/2022 22:20						
Run average		3.11	362.76	1.81	14581.83	681.79	986.64

CEMS Data

Run #	Date/Time	H2S (ppm)	CZ NHV (Btu/SCF)	S/VG	Vent Gas Volume Flow (SCFH)	Vent Gas Mass Flow (PPH)	NHV of VG(Btu/SCF)
		09AI0994H	09AI0991K	09FFI0992A	09FI0992C	09FI0992H	09AI0991B_B
	10/5/2022 22:20	3.14	366.63	1.86	13752.58	653.22	985.44
	10/5/2022 22:21	3.14	361.83	1.87	13764.85	648.69	985.38
	10/5/2022 22:22	3.14	357.96	1.88	13728.61	644.15	985.31
	10/5/2022 22:23	3.16	354.50	1.88	13707.79	639.05	985.25
	10/5/2022 22:24	3.27	358.79	1.87	13517.53	638.18	985.18
	10/5/2022 22:25	3.27	356.37	1.87	13537.42	643.87	985.12
	10/5/2022 22:26	3.27	353.78	1.86	13635.59	649.57	985.14
	10/5/2022 22:27	3.27	360.03	1.86	14088.26	655.27	985.39
	10/5/2022 22:28	3.27	359.40	1.85	14423.99	660.96	985.64
	10/5/2022 22:29	3.27	357.15	1.85	14458.55	666.66	985.89
	10/5/2022 22:30	3.27	354.57	1.84	14462.51	672.35	986.14
	10/5/2022 22:31	3.18	356.00	1.84	14356.87	678.05	986.39
	10/5/2022 22:32	3.17	366.21	1.81	14598.77	683.75	986.64
	10/5/2022 22:33	3.17	369.61	1.81	14792.77	689.24	986.89
	10/5/2022 22:34	3.18	366.91	1.81	14740.26	689.37	987.13
	10/5/2022 22:35	3.17	363.67	1.82	14746.83	689.18	987.38
7	10/5/2022 22:36	3.18	362.76	1.82	14500.25	689.00	987.61
	10/5/2022 22:37	3.17	363.56	1.82	14449.31	688.82	987.45
	10/5/2022 22:38	2.95	364.37	1.82	14520.19	688.63	987.14
	10/5/2022 22:39	2.91	365.17	1.83	14429.26	688.45	986.84
	10/5/2022 22:40	2.92	365.98	1.83	14341.65	688.27	986.54
	10/5/2022 22:41	2.91	366.78	1.83	14738.41	688.08	986.23
	10/5/2022 22:42	2.92	367.59	1.84	14445.02	687.90	985.93
	10/5/2022 22:43	2.91	368.39	1.85	14495.76	687.73	985.63
	10/5/2022 22:44	2.92	369.17	1.86	14777.56	688.79	985.32
	10/5/2022 22:45	3.12	366.27	1.87	14819.22	686.05	985.02
	10/5/2022 22:46	3.17	360.67	1.89	14374.67	683.16	984.77
	10/5/2022 22:47	3.17	356.01	1.90	13988.24	680.27	984.80
	10/5/2022 22:48	3.17	356.94	1.91	13828.12	677.38	984.86
	10/5/2022 22:49	3.17	351.61	1.92	14000.85	674.48	984.91
	10/5/2022 22:50						
Run average		3.13	361.62	1.85	14267.39	673.29	985.91

Run #	Date/Time	H2S (ppm)	CZ NHV (Btu/SCF)	S/VG	Vent Gas Volume Flow (SCFH)	Vent Gas Mass Flow (PPH)	NHV of VG(Btu/SCF)
		09AI0994H	09AI0991K	09FFI0992A	09FI0992C	09FI0992H	09AI0991B_B
	10/5/2022 22:50	3.17	353.59	1.90	14157.45	671.59	984.97
	10/5/2022 22:51	3.17	357.00	1.87	14231.76	668.70	985.02
	10/5/2022 22:52	2.67	359.49	1.84	14196.08	665.81	985.08
	10/5/2022 22:53	2.44	361.43	1.84	14308.49	662.92	985.13
	10/5/2022 22:54	2.44	363.37	1.85	14672.58	667.20	985.19
	10/5/2022 22:55	2.44	365.21	1.86	15021.93	671.37	985.24
	10/5/2022 22:56	2.44	363.75	1.88	15160.61	674.90	985.30
	10/5/2022 22:57	2.44	361.30	1.89	15250.35	678.43	985.18
	10/5/2022 22:58	2.44	357.19	1.90	15088.77	681.96	984.98
	10/5/2022 22:59	2.81	353.69	1.92	14754.93	685.49	984.77
	10/5/2022 23:00	3.10	353.55	1.92	14952.16	689.02	984.57
	10/5/2022 23:01	3.10	357.88	1.85	15062.66	692.55	984.37
	10/5/2022 23:02	3.10	360.75	1.81	15584.50	696.08	984.16
	10/5/2022 23:03	3.10	366.52	1.77	15915.49	699.61	983.96
	10/5/2022 23:04	3.10	369.59	1.77	16153.40	701.11	983.75
	10/5/2022 23:05	3.10	372.51	1.78	15817.75	697.83	983.55
8	10/5/2022 23:06	3.06	372.02	1.79	15590.37	694.32	983.34
	10/5/2022 23:07	3.00	370.37	1.81	15633.32	690.81	983.24
	10/5/2022 23:08	3.01	368.71	1.82	15253.84	687.30	983.22
	10/5/2022 23:09	3.00	367.05	1.83	14982.42	683.79	983.21
	10/5/2022 23:10	3.00	363.50	1.85	14824.92	680.28	983.19
	10/5/2022 23:11	3.00	355.61	1.87	14507.74	676.77	983.18
	10/5/2022 23:12	3.00	349.67	1.86	14424.13	673.26	983.17
	10/5/2022 23:13	3.25	355.90	1.84	14795.79	669.76	983.15
	10/5/2022 23:14	3.90	359.81	1.83	14923.02	667.08	983.14
	10/5/2022 23:15	3.90	363.04	1.82	14955.68	666.12	983.12
	10/5/2022 23:16	3.90	366.86	1.80	14801.86	665.18	983.11
	10/5/2022 23:17	3.90	369.43	1.79	15395.12	664.24	983.34
	10/5/2022 23:18	3.90	372.00	1.79	15110.29	663.31	983.71
	10/5/2022 23:19	3.90	369.81	1.82	14515.65	662.37	984.08
	10/5/2022 23:20						
Run average		3.09	362.69	1.84	15001.44	678.31	984.05

CEMS Data

Run #	Date/Time	H2S (ppm)	CZ NHV (Btu/SCF)	S/VG	Vent Gas Volume Flow (SCFH)	Vent Gas Mass Flow (PPH)	NHV of VG(Btu/SCF)
		09AI0994H	09AI0991K	09FFI0992A	09FI0992C	09FI0992H	09AI0991B B
	10/5/2022 23:20	3.68	361.90	1.86	14185.32	661.43	984.45
	10/5/2022 23:21	2.56	357.55	1.86	14249.28	660.49	984.82
	10/5/2022 23:22	2.55	359.82	1.86	14289.85	659.55	985.19
	10/5/2022 23:23	2.55	357.01	1.86	14155.37	658.61	985.56
	10/5/2022 23:24	2.55	360.83	1.85	13965.72	658.73	985.92
	10/5/2022 23:25	2.55	358.80	1.85	13824.98	660.14	986.29
	10/5/2022 23:26	2.55	356.76	1.85	13838.59	661.39	986.66
	10/5/2022 23:27	2.62	354.50	1.84	13867.79	662.64	986.76
	10/5/2022 23:28	3.09	356.17	1.84	13715.50	663.89	986.65
	10/5/2022 23:29	3.10	358.20	1.84	13940.86	665.14	986.54
	10/5/2022 23:30	3.10	361.82	1.83	14457.44	666.39	986.43
	10/5/2022 23:31	3.10	362.11	1.84	14480.60	667.64	986.32
	10/5/2022 23:32	3.10	360.61	1.86	14093.56	668.89	986.21
	10/5/2022 23:33	3.10	359.11	1.88	14341.74	670.14	986.10
	10/5/2022 23:34	3.09	357.61	1.90	14500.82	667.92	985.99
	10/5/2022 23:35	2.89	354.99	1.92	14321.98	667.82	985.88
9	10/5/2022 23:36	2.89	356.68	1.91	14381.97	669.60	985.77
	10/5/2022 23:37	2.89	358.85	1.88	14785.61	671.38	985.69
	10/5/2022 23:38	2.89	361.73	1.85	14918.98	673.16	985.58
	10/5/2022 23:39	2.88	371.48	1.79	14549.78	674.94	985.47
	10/5/2022 23:40	2.89	376.64	1.74	14214.30	676.73	985.36
	10/5/2022 23:41	2.89	367.52	1.75	14673.27	678.51	985.24
	10/5/2022 23:42	3.24	367.97	1.77	14989.23	680.29	985.13
	10/5/2022 23:43	3.30	369.60	1.80	14533.12	682.07	985.01
	10/5/2022 23:44	3.30	365.54	1.83	14258.63	685.28	984.90
	10/5/2022 23:45	3.30	361.89	1.84	14112.75	682.60	984.79
	10/5/2022 23:46	3.30	359.58	1.85	13936.43	678.11	984.67
	10/5/2022 23:47	3.30	356.98	1.86	13869.83	673.62	984.63
	10/5/2022 23:48	3.30	361.37	1.87	13662.79	669.12	984.73
	10/5/2022 23:49	3.32	362.18	1.88	13670.42	664.63	984.83
	10/5/2022 23:50						
Run average		3.00	361.19	1.84	14226.22	669.36	985.58

Run #	Date/Time	H2S (ppm)	CZ NHV (Btu/SCF)	S/VG	Vent Gas Volume Flow (SCFH)	Vent Gas Mass Flow (PPH)	NHV of VG(Btu/SCF)
		09AI0994H	09AI0991K	09FFI0992A	09FI0992C	09FI0992H	09AI0991B B
	10/5/2022 23:50	3.33	358.60	1.89	13372.32	660.14	984.93
	10/5/2022 23:51	3.33	355.32	1.90	13219.20	655.65	985.03
	10/5/2022 23:52	3.33	353.73	1.92	13371.10	651.16	985.13
	10/5/2022 23:53	3.33	351.60	1.90	14060.56	646.67	985.23
	10/5/2022 23:54	3.33	352.20	1.87	14096.82	643.57	985.33
	10/5/2022 23:55	3.33	363.69	1.83	14310.97	644.35	985.43
	10/5/2022 23:56	3.00	366.57	1.81	14665.16	645.35	985.53
	10/5/2022 23:57	2.84	368.25	1.79	15030.41	646.36	985.45
	10/5/2022 23:58	2.84	369.93	1.77	14799.06	647.36	985.04
	10/5/2022 23:59	2.84	372.43	1.75	14840.58	648.36	984.61
	10/6/2022 0:00	2.84	372.60	1.76	14340.13	649.37	984.19
	10/6/2022 0:01	2.84	370.62	1.78	14030.74	650.37	983.76
	10/6/2022 0:02	2.84	368.64	1.81	13773.60	651.37	983.34
	10/6/2022 0:03	2.92	362.83	1.84	14011.86	652.38	982.91
	10/6/2022 0:04	2.99	347.79	1.93	13917.24	649.82	982.49
	10/6/2022 0:05	2.99	349.71	1.92	13822.79	651.24	982.06
10	10/6/2022 0:06	2.99	348.84	1.90	13971.21	656.11	981.64
	10/6/2022 0:07	2.99	356.29	1.87	14215.47	660.98	981.43
	10/6/2022 0:08	2.99	361.56	1.84	14204.83	665.85	981.80
	10/6/2022 0:09	2.99	363.71	1.82	14398.40	670.72	982.20
	10/6/2022 0:10	3.21	365.52	1.79	14432.06	675.59	982.61
	10/6/2022 0:11	3.46	367.93	1.77	14712.51	680.46	983.01
	10/6/2022 0:12	3.46	366.25	1.77	14916.37	685.33	983.42
	10/6/2022 0:13	3.46	362.69	1.83	15180.08	690.20	983.82
	10/6/2022 0:14	3.46	366.27	1.83	15071.75	694.00	984.23
	10/6/2022 0:15	3.46	367.79	1.83	14975.79	694.76	984.64
	10/6/2022 0:16	3.46	366.18	1.83	15019.72	695.59	985.04
	10/6/2022 0:17	3.39	364.57	1.83	14736.21	696.43	985.34
	10/6/2022 0:18	3.26	362.96	1.83	14520.27	697.26	985.25
	10/6/2022 0:19	3.26	360.64	1.83	14496.77	698.09	985.11
	10/6/2022 0:20						
Run average		3.16	362.19	1.83	14350.47	665.16	984.00